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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,222	11/17/2003	Frederick L. Martin	CML01286J	4439

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LEVEQUE INTELLECTUAL PROPERTY LAW, P.C.
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FREDERICK, MD 21701

EXAMINER

FILE, ERIN M

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/715,222	Applicant(s) MARTIN ET AL.	
	Examiner Erin M. File	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-32 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-17, 19-28 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17, 18-28 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant's arguments, see Remarks, filed 1/26/2007, with respect to Claims 29-32 have been fully considered and are persuasive. The rejection of Claims 29-32 has been withdrawn.

Drawings

4. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete. 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

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number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings fail to illustrate a method as described in Claims 19-26, and 28 and are therefore incomplete in their illustration of the invention.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5, 9-16, 19-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuzuka (U.S. Patent No. 6,154,482) in view of Geesen et al. (U.S. Patent No. 4,479,255).

Claims 1, 19, Inuzuka discloses a frequency converter (202, 208) that receives the local oscillator signal and mixes the local oscillator signal with a received signal to produce a down-converted signal direct sequence (DS) spread spectrum system (col. 1, lines 11-17) encodes with a set of DSSS codes. Inuzuka further discloses the correlator of the differentially detected signal with the second set of DSSS codes is operable to mitigate effects of at least one of a frequency offset of the local oscillator signal relative to the received DSSS signal and a phase noise of the local oscillator signal (col. 6, lines 38-52). Inuzuka fails to disclose a frequency generator that generates a local oscillator signal without the use of a piezoelectric crystal, however, Geesen discloses the use of a VCO type oscillator which is not of a piezoelectric type (col. 3, lines 35-43). Because Geesen discloses this type of oscillators has distinct speed advantages (col. 3, lines 35-43) it would have been obvious to one skilled in the art at the time of invention to incorporate the oscillator as disclosed by Geesen into the invention of Inuzuka.

Claim 2, 20, inherits the limitations of Claim 1. Further, Inuzuka discloses the differential detector (fig. 2) comprises one chip symbol delays (112), one being an integer multiple of chip periods (col. 2, 31-36).

Claims 3, 21, although Inuzuka does not explicitly state that the differentially detected-signal comprises output chips which are a function of a plurality of successive chips of the received signal, the output chips of a differential detector are by definition a function of a plurality of successive chips of the input signal.

Claims 5, 16, 22, Geesen discloses the use of a VCO type oscillator which is not of a piezoelectric type (col. 3, lines 35-43)

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Claim 9, further Inuzuka discloses the down-converted signal comprises a baseband signal (col. 1, lines 60-65).

Claim 10, inherits the limitations of Claim 1, further Inuzuka discloses the down-converted signal comprises an intermediate frequency (IF) signal (col. 1, lines 39-41).

Claims 11, 12, 23, 25-28, contain the limitations of Claim 1, further Inukuza discloses an aspect of the invention is also transmitting a spread spectrum modulated signal on a carrier (col. 4, lines 10-13).

Claim 13, inherits the limitations of Claim 1, Inukuza discloses differential decoding circuits (fig. 12, 205, 211) includes a processor that receives the down-converted signal and produces output chips therefrom which are a function of a plurality of successive chips of the received DSSS signal (col. 13, line 65-col. 14, line 5).

Claim 14, inherits the limitations of Claim 13, Inukuza further discloses correlating output chips at the output of the processor to at least one spread spectrum code that has been derived from the received spread spectrum signal (col. 13, line 65- col. 14, line 5).

Claims 15, 23, 24, Geesen discloses an RF source that generates a transmitter carrier signal, wherein the RF source comprises an oscillator that generates the RF transmitter carrier signal without use of a piezoelectric element (col. 3, lines 35-43); Inuzuka discloses a DSSS modulator which modulates a message to be transmitted onto the transmitter carrier signal using at least one known DSSS code word (col. 1, lines 19-28).

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9. Claims 6-8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inuzuka (U.S. Patent No. 6,154,482) and Geesen et al. (U.S. Patent No. 4,479,255) as applied to claims 1, 5, and 15 above, and further in view of Hartman et al. (U.S. Pub. No. 2001/0030556).

Claims 6, 17, Hartmann discloses comprising means for initial adjustment of the frequency of the RF transmitter carrier signal ([0021], lines 14-19). Because Ben-Bassat discloses the need for temperature variation control in resonating materials, it would have been obvious to one skilled in the art at the time of invention to incorporate Hartman's frequency compensation method into the combined inventions of Inuzuka and Geesen.

Claim 7, Although neither Inuzuka nor Ben-Bassat disclose a compensation circuit that compensates the RF source against changes in temperature, Ben-Bassat does disclose the need for temperature stability when using resonating materials other than crystal (col. 13, lines 15-19). Hartman discloses comprising means for initial adjustment of the frequency of the local oscillator signal in response to temperature conditions ([0021], lines 14-19). Because Ben-Bassat discloses the need for temperature variation control in resonating materials, it would have been obvious to one skilled in the art at the time of invention to incorporate Hartman's frequency compensation method into the combined inventions of Inuzuka and Geesen.

Claim 8, the compensation as disclosed by Hartman allows for multiple frequency conversion ([0021], lines 14-19).

Allowable Subject Matter

10. Claims 29-32 are allowed.
11. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 1:00PM-9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571)272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Erin M. File



2/8/2007



DAVID C. PAYNE
PRIMARY PATENT EXAMINER